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AUTHOR Cochran, Leslie H.
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ABSTRACT

Career education models are based on the identification and analysis of major components needed to adapt present curricula into career-oriented curricula. There are four such models: school-based, employer-based, home/community based, and residential-based. The Comprehensive Career Education Model, a school-based model, provides the base to design educational experiences optimizing career development and gain an understanding of self and the world of work. It has eight major elements subdivided into 32 supporting themes. The Research for Better Schools (RBS) model, an employer-based model, is composed of a management structure, an instructional program, guidance and counseling, and an evaluation plan. The Far West Laboratory Model is also an employer-based model, different from RBS in several aspects. A home/community model was designed consisting of a comprehensive career-oriented program centered in individualized learning programs. The Mountain Plains residential-based model unites family services and educational services to form a totally self-contained educational community. (The school-based model, as the point of departure for the other three models, receives most of the article's emphasis.) (AG)

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MODELS FOR CAREER EDUCATION

Leslie H. Cochran
Associate Dean
School of Fine and Applied Arts
Central Michigan University
Mt. Pleasant, Michigan 48859

The American educational system has undergone drastic changes during the Twentieth Century with limited affect on the total educational system. Contradictory as this statement may seem, a review of each of the preceding decades reveals that educational leaders have been actively involved in introducing change. The progressive, general education, and life adjustment movements are but a few that have attracted the support of large segments of the profession. These efforts have greatly extended educational opportunity and have broadened the experiential base of students, but have also fragmented the total system and have, in fact, produced a disjointed and segmented educational system with no other uniform purpose other than the completion of some fifteen thousand aggregated hours to qualify the student for exiting from the system.

While societal changes, technological advancements, and the formalization of disciplines have further compounded the problem, many of the same basic concerns expressed at the turn of the Century are prevalent today. The only significant change is in the terms, slogans, and educational jargon used to stress the inability of educational programs to meet the needs of youth. Like many of its predecessors, the career education thrust faces many of the same barriers and pitfalls. It does, however, have some distinct advantages that were not present in earlier attempts to reform education. For example, it is

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community based with growing public support, it is unified around one theme, it has received significant impetus from federal sources and resources, and it is predicated on a models or systems approach to education. While in an embryonic stage, the use of models for career education are of special significance to the movement and are the focus of this chapter.

The Educational Model

The growth in the use of models has paralleled the development of various segments of intellectual inquiry. For example, the quest for knowledge in scientific fields such as astronomy, biology, chemistry, and medicine has led to highly developed systems approaches. Other applications are also prevalent in economics, political science, psychology, and sociology. In the area of business, decision making, problem solving, and research and development models form the base for massive, complex enterprises. In contrast, the use of the term model in education has been far more infrequent. Only recently has the broadened meaning of the term model been applied to education in an extension of concepts inherent in instructional designs, curriculum frameworks, courses of study, and programs.

An educational model, however, goes far beyond the pattern or organization used in selecting, planning, and carrying forward educational experiences in the school. The most significant distinction in the use of models is that it requires a departure from the traditional focus on the narrow functional speciality and places emphasis on meeting the overall objectives of education. It thereby creates a flow network within the total educational community which builds upon subsystems that are interrelated, integrated, interdependent, and that interact with the array of components (activities, content, experiences, mechanisms, procedures, strategies, etc.) selected to

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achieve the desired goals. Thus, the educational model provides a basis to make decisions and to critically review curriculum plans in an organized manner using scientific approaches and recognized goals rather than being guided by an ill-considered mixture of assumptions, beliefs, and personal preferences.

Numerous advantages for the use of models in promoting educational change have been cited. In respect to career education, the following seem particularly important:

1) The model provides the total framework and suggests the interrelationships between all elements.

2) The model creates a positive climate among faculty, parents, and students for change.

3) The model removes the administrator from the role of change agent and reduces the resistance to administrative mandate.

4) The model provides for the use of change agents from either inside or outside the school system.

5) The model provides for feedback, self-correction, and stabilization for the entire approach.

The Career Education Models

The career education models under development and refinement follow the pattern described for models within the educational context. They are large-scale models with more inputs and greater conceptual complexity than found in the great majority of programs currently in existence in the public school systems. In essence, the models are based on the identification and analysis of major components required to adapt the present curriculum patterns into a common theme that is consonant with the goals of career education. The models provide a basis to ascertain the relationships between the components, specify goals to be reached, convert the goals into operationally

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defined objectives, design from the components the methods yielding the highest probability of reaching the objectives, install evaluation procedures, and feed the results back into the model to provide for greater efficiency, continuous reexamination, adjustments, and further testing and evaluation.

The restructuring of education around a developmental theory stressing relevance to life roles required a detailed framework for constructing career education curricula. Within this frame of reference, essential elements were researched and in some cases a matrix developed to provide a basis to reject some items as unnecessary and to select others as contributing to the goals of career education. This conceptualization process revealed that there are several different theories from the fields of human growth and development, vocational guidance, and curriculum development that must be integrated into the models. Further, it was apparent that to provide for the self-actualization of all students it was necessary to develop alternative strategies to deliver and facilitate the goals of career education.

Four alternative conceptualizations of career education deserve special consideration at this point. These are 1) the school-based model, 2) the employer-based model, 3) the home/community-based model, and 4) the residential-based model. It is difficult, if not impossible, to assess the full range of implications for each of these models or to determine their synergistic effect. The ramifications, however, of the school-based career education are significantly magnified when considered in relation with the other three. Since all of the models are related to the school-based model, expanded emphasis is focused on it.

Consistent with the goals of career education, the models incorporate a concept of the individual's lifelong entitlement to the educational opportunities required for career awareness, selection, preparation, placement, and

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advancement. The school-based model is the formative developmental program provided for all children and youth. The other models extend the concept beyond the formal school and provide educational opportunities for individuals throughout the successive stages of life. They provide a variety of options for individuals who, for one reason or another, need to recycle their earlier activities, or who desire to advance in their career goals. Thus, the models are open for career awareness, development, and preparation for any [illegible] age, regardless of the circumstances of life and work, and irrespective of the social or physical barriers that may be imposed.

SCHOOL-BASED MODEL

[illegible] In 1971, the U.S. Office of Education determined that there was sufficient merit in the concept of career education to justify a research effort. In June of that year, the Center for Vocational and Technical Education at the Ohio State University received a two million dollar grant, which has since been supplemented, to serve as the project manager for the school-based model. As the prime contractor for the development, testing, and installation of the school-based Comprehensive Career Education Model, the Center has assumed responsibility as a "research and development" and "facilitating" agent. Six cooperating local school districts (Mesa, Arizona; Los Angeles, California; Jefferson County, Colorado; Atlanta, Georgia; Hackensack, New Jersey) were selected by the Office of Education as part of the network to serve as test and development sites. These districts provide considerable diversity, for they represent variations in the size of school districts, geographic settings, cultural and ethnic mix, and [illegible] Nearly four thousand teachers and administrators working with over 80,000 students

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Overview of the Model

The major purpose of the Comprehensive Career Education Model is to refine and operationally define in terms of student outcomes the conceptualization of the school-based model. The K-12 school enterprise is viewed as an integrated process concerned with optimizing individual career development while concurrently enhancing knowledge of self and self-actualization. While the career education concept extends through adult education, the school-based model is aimed at the K-12 system and:

1. Progresses from early childhood into the adult years.
2. Involves all students regardless of their post-secondary school plans.
3. Involves the entire school program and the resources of the community.
4. Joins the student, his parents, and the schools, the community and employers in a cooperative educational effort.
5. Provides the student with information and experiences representing the entire world of work.
6. Expects the student from initial career awareness, to career exploration, career direction-setting, career preparation and career placement, and provides for placement follow-through, including re-education if desired.[1]

The model, as illustrated in Figure 1, provides the base to design educational events more sequenced and structured to optimize career development and to expand a broad basis for an understanding of self and the world of work. It utilizes and builds upon the motivating force of career interest, development and preparation as a means to make all aspects of the school more relevant to life purposes and to stimulate student interest and participation in the school. Thus, the assimilation of knowledge is viewed as an explorative pro-

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[1] Marvin J. Feller, "Strategies for Implementing Career Education: A School-Based Model," A Paper Presented at the Annual Meeting of the American Educational Research Association, Chicago, Illinois, April 3-7, 1972, p. 2.

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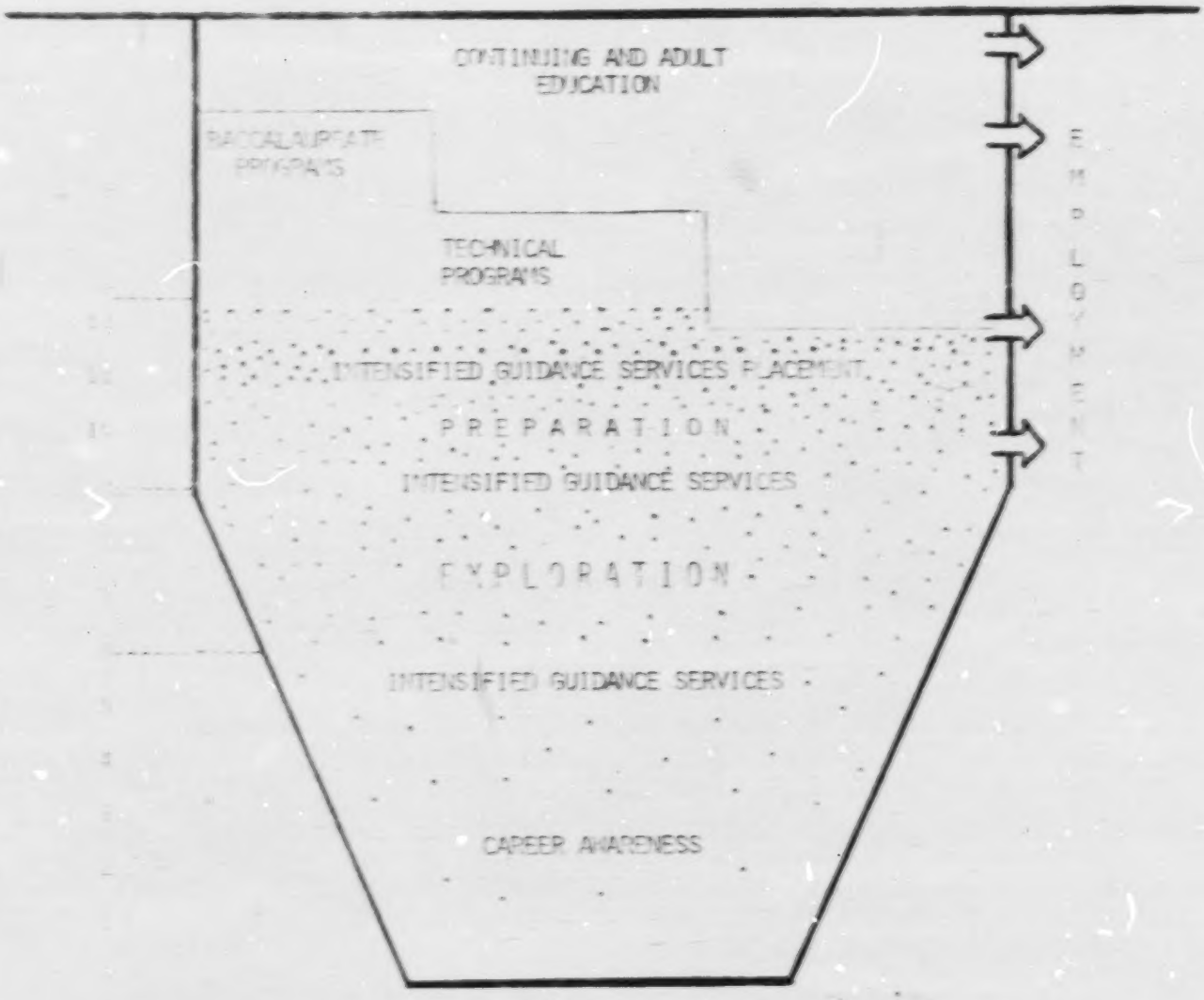
FIGURE 1

COMPREHENSIVE CAREER EDUCATION MODEL[2]



[2] Ohio Department of Vocational and Technical Education. Ohio Comprehensive Career Education Model: Part I - Progress Report, Columbus, Ohio: The Ohio State University, Contract No. 7-0158 and Grant No. OEG-0-72-1419(), May 15, 1972, p. 1.

cess rather than merely descriptive, and emphasizes subject matter as the means rather than the end.

The systematic approach implied by the "research and engineering" connotation for infusing career education into the existing K-12 curriculum places heavy emphasis on the mapping of the project and the defining of plans of action by time periods. It requires that emphasis be placed on quality control and evaluation procedures, detailed management structures, problem solving techniques, sophisticated data collection methods, documentation of project activities, and the development of instructional modules.

The eight major elements of career education in the model which extend vertically through the curriculum were identified to facilitate individual progress through career awareness, orientation, exploration, and preparation. These have been fractionated into thirty-two supporting themes from which approximately fifteen hundred goals have been established. Approximately three thousand student performance objectives have been written (with others under development) to attain these goals which support the themes and are designed to provide for the attainment of the eight basic program elements. Along with the matrix development, a national inventory of materials and programs was undertaken to produce the prescribed outcomes concurrent with the model. Bench-mark data was collected and analyzed to establish the present state of affairs in regard to student, school, and community activities. Concurrently, a diagnosis was made of programs in the six site schools to determine what portions of the model were already in place and operating. Prescriptive treatments were formulated, evaluated against desired outcomes, and recycled when necessary. These cycles of diagnosis, prescriptive treatment assessment, acceptance, rejection, and recycling are major aspects of the development and testing of the elements.

Essential Components in the Model

The basic concept of career education provides general direction for the school-based model, but the restructuring of education around a developmental theory stressing relevance to life roles requires a more detailed operational framework. To properly develop the model, a specific reference is needed to ascertain whether proper emphasis is given to the selection and modification of instructional modules to insure that the resulting program is comprehensive and soundly based. Answers must be provided for such questions as: "What are the major elements of the school-based model?" "What is the guiding framework?" "What are the expected outcomes?" "What are the basic ingredients of the program?" The following essential components provide direction for the Comprehensive Career Education Model.

Career Education Elements and Outcomes

The elements of career development that provide for the self-actualization of the student are imparative to the development of the detailed conceptualization of the school-based model. There are numerous ways of identifying these elements for operational purposes. This was accomplished for the school-based model by the Center through an examination of theories and authorities in the fields of human growth and development, vocational guidance, and curriculum development. The identified elements lead to specified outcomes as illustrated in Figure 2. For example, the element of career awareness, which is the student's knowledge of the total spectrum of careers, leads to eventual career identity. That is, career identity being defined as understanding one's potential roles within the world of work. Other career education elements and their associated goals include the elements of appreciations and attitudes which lead to self-social fulfillment; decision-making skills/career decisions; economic awareness/economic understanding; skill

FIGURE 2

CAREER EDUCATION ELEMENTS AND OUTCOMES[1]

Career Education Elements	Element Outcomes
CAREER AWARENESS Knowledge of the Total Spectrum of Careers	CAREER IDENTITY Role or Roles Within the World of Work
SELF AWARENESS Knowledge of the Components that Make Up Self	SELF IDENTITY Know Himself--Consistent Value System
APPRECIATIONS, ATTITUDES Life Roles--Feeling Toward Self & Others in Respect to Society & Economics	SELF SOCIAL FULFILLMENT Active Work Role Satisfying Work Role
DECISION-MAKING SKILLS Applying Information to Rational Processes to Reach Decisions	CAREER DECISIONS Career Direction, Has a Plan for Career Development
ECONOMIC AWARENESS Perceives Processes in Production, Distribution and Consumption	ECONOMIC UNDERSTANDING Solve Personal & Social Problems in an Economic Environment
SKILL AWARENESS & BEGINNING COMPETENCE Skills--Ways in Which Man Extends his Behaviors	EMPLOYMENT SKILLS Competence in Performance of Job-related Tasks
EMPLOYABILITY SKILLS Social & Communication Skills Appropriate to Career Placement	CAREER PLACEMENT Employed in Line with Career Development Plan
EDUCATIONAL AWARENESS Perceives Relationship between Education & Life Roles	EDUCATIONAL IDENTITY Ability to Select Educational Avenues to Develop Career Plans

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1 Ibid., p.6.

awareness and beginning competence/employment skills; employability skills/ career placement; and educational awareness/educational identity.

Comprehensive Career Education Matrix

The matrix developed for the Model is based on the defined goals of career education as represented by the identified elements and outcomes. This provides the operational definition for the school-based Comprehensive Career Education Model. Inherent in the matrix are the following assumptions:

1. It is essential that each person know himself and develop a personal value system.
2. It is essential that each person perceive the relationship between education and life roles.
3. It is essential that each person acquire knowledge of the wide range of careers.
4. It is essential that each person be able to perceive processes in production, distribution, and consumption relative to his economic environment.
5. It is essential that each person be able to use information in determining alternatives and reaching decisions.
6. It is essential that each person acquire and develop skills which are viewed as the ways in which man extends his behavior.
7. It is essential that each person develop social and communication skills appropriate to career placement and adjustment.
8. It is essential that each person develop appropriate feelings toward himself and others.[4]

The OCDM program matrix contains the eight career education elements along one axis and grades K through 12 along the other axis (see Figure 3). Building upon this organizational framework, themes, goals, and performance objectives appropriate for each of the 104 cells in the matrix grid were developed by classroom teachers, curriculum/guidance specialists, and other school personnel. While far from ideal or complete, it provides a frame of

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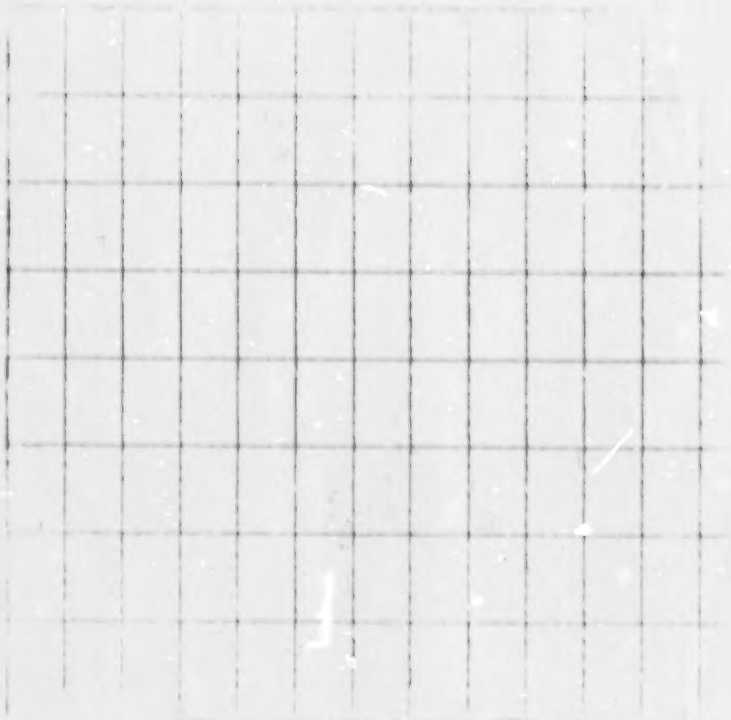
[4] The Center for Vocational and Technical Education, Developmental Program Components, Comprehensive Career Education Model. (Columbus, Ohio: The Ohio State University, August, 1972, p. 4.

FIGURE 3

COMPREHENSIVE CAREER EDUCATION MODEL

DEVELOPMENTAL PROGRAM GOALS

K 1 2 3 4 5 6 7 8 9 10 11 12



CAREER AWARENESS

SELF AWARENESS

APPRECIATIONS, ATTITUDES

DECISION-MAKING SKILLS

ECONOMIC AWARENESS

BEGINNING COMPETENCY

EMPLOYABILITY SKILLS

EDUCATIONAL AWARENESS

ELEMENTS OF CAREER EDUCATION

CAREER IDENTITY

SELF IDENTITY

SELF-SOCIAL FULFILLMENT

CAREER DECISIONS

ECONOMIC UNDERSTANDINGS

EMPLOYMENT SKILLS

CAREER PLACEMENT

EDUCATIONAL IDENTITY

ELEMENT OUTCOMES

[5] The Center for Vocational and Technical Education, The Comprehensive Career Education Model: Progress Report. Prepared for the U.S. Office of Education, (Project No. [illegible] Grant No. OEG-72-1419), July 20, 1972, p. 16.

reference for defining the direction of program content and developing supporting curriculum materials.[6]

Occupational Clustering

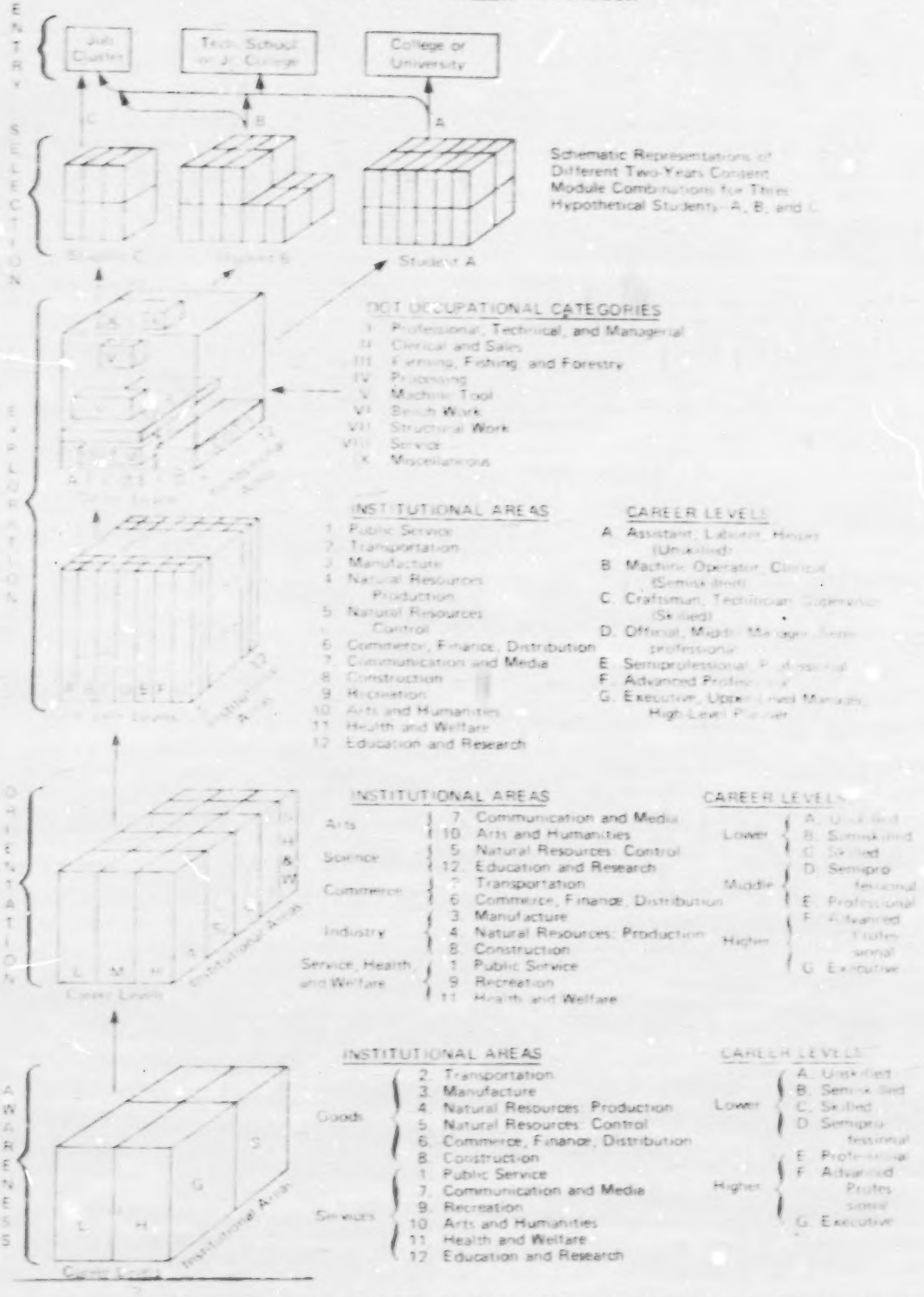
The initial USOE clustering concept for career education provided an organizational structure for occupational and career preparation information for the school-based model. The purposes of this clustering system were to supply the student with information about the world of work, to assist in the selection of a career consistant with interests and abilities, and to provide guidelines that would shape instructional objectives and learning experiences. Later in the developmental process, the Human Resources Research Organization (HumRRO) developed a new clustering system specifically to identify and validate appropriate career clusters for CCEM. By synthesizing useful features from existing types of systems (descriptive, sociological-psychological, and task-analytic), HumRRO designed a clustering model with one facet representing institutions, a second using occupational groups, and a third depicting the status or level at which the occupation exists (see Figure 4).

The system calls for a rather simple combination of the main institutional career areas and career levels dimension at the awareness level and a somewhat more detailed combination of the same factors at the orientation level. A detailed breakout of these factors and a blending of the DOT functional occupational categories is provided at the exploration level. The shift in emphasis at the selection level is to the DOT functional occupational categories with a deemphasis of the first two factors. The demarcation between each of these levels is dependent on the readiness of the individual student to select and begin specialization rather than being determined by a particular grade level.

[6]Further refinement of the matrix cells is underway, but the initial goals are available from the Center for Vocational and Technical Education under the title Developmental Program Goals: Comprehensive Career Education Model.

FIGURE 4

OCCUPATIONAL CLUSTERING FOR THE COMPREHENSIVE CAREER EDUCATION MODEL



John C. Taylor, Ernest K. Montague, and Eugene R. Michaelis, An Occupational Clustering System and Curriculum Implications for the Comprehensive Career Education Model. (Alexandria, Virginia: Human Resources Research Organization), January, 1972, p. 19.

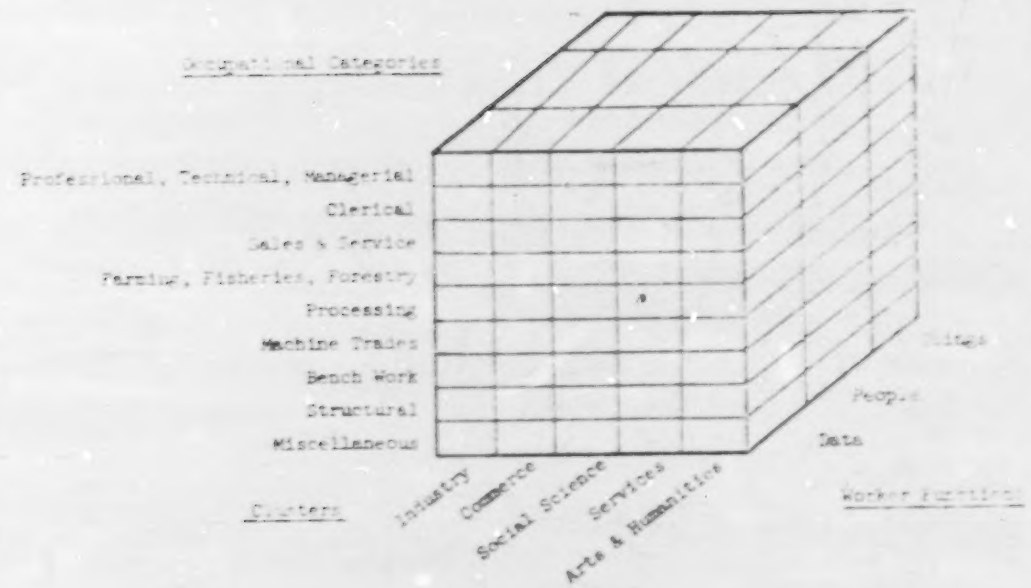
Based on these approaches to clustering, the Center and supporting local education agency personnel developed a Career Information System (CIS) to provide for a structure of knowledge for the school-based model. As illustrated in Figure 5, this three dimensional cube includes product information (clusters), process information (occupations), and personal information (worker functions).

Figure 5

CAREER INFORMATION MODEL[8]

Grades 4-6

CAREER AWARENESS



Building Career Education Concepts

In addition to the concepts and components already discussed, there are several others that are integrated in to the school-based model. The emphasis on the five areas of career guidance, community involvement, program-

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[8] Bruce Belnhart, "Building A Comprehensive Career Education System," A Paper Presented at the National Council of Local Administrators Meeting, American Vocational Association Convention, Chicago, Illinois, December 2, 1972, p. 16.

matic redirection, support systems, and implementation strategies, however, suggests the need to single these out for special attention.

Career Guidance. The role of career guidance within the context of career education is substantially different than viewed by many educators in the traditional context of education. For example, it is based on a more comprehensive view of the individual and his career development over a life span. It is a career development process which takes place over a period of time. It [illegible] only on an analysis and classification of occupations, but is [illegible] the work setting to assist individuals to better understand themselves. Concurrently, the roles of teachers and counselors [illegible] significantly. The guidance program assists students to [illegible] and developmental tasks by utilizing a team approach with all instructional personnel sharing expanded guidance responsibilities.

Community Involvement. The establishment of a viable partnership in which information, responsibility, and decision making are shared by all involved in education is a primary component of the school-based model. As a total education system rather than a program, a new community relations role is required. Professional autonomy and career education are incompatible in that it is unrealistic for educators to prepare students for a wide range of careers without the assistnace of the community, to simulate the career environment of all occupations, to provide the required facilities and faculties, or to develop and maintain a comprehensive program without extensive community support and assistance. This partnership includes various socio-economic and minority groups, special interest groups, and consumer groups including students, parents, and industrial representatives.

Programmatic Redirection. While stated throughout this chapter, it cannot be overemphasized that career education is a major attempt to redirect the total educational system. The school-based model demands a reassessment in

terms of new goals that will permeate every program and every aspect of the school. As a total system, educational experiences in grades K-12 are structured around the career development of each student which: 1) integrates the academic knowledges and skills with occupational preparation, 2) assures that each existing student will be prepared for a further career education program and for entry into an occupation, 3) provides for each student a program relevant to the becoming of a self-fulfilled, productive, and contributing citizen, and 4) focuses the educational experiences of students around real life developmental needs.

Support Systems. The school-based model is based on the development and utilization of several supporting information systems. This component insures the gathering, storing, analyzing, and disseminating of reliable information. It includes, for example, occupational and labor market information needed in the classroom and counseling office; data about community organizations; information about required instructional materials and resources; classroom data relating class, grade, school, district, and program activities to program goals and objectives; clustering data for curriculum development activities; and information pertaining to assisting students in educational planning. The five key data files used for these and related purposes include student data, class data, career information data, educational resources, and placement information files.

Implementation Strategies. While the school-based model is built on a sound philosophical and theoretical framework, the key to its success is dependent on the unresolved issues and questions that can only be obtained through the implementation process. This involves a magnitude of areas for which strategies and techniques are being developed and tested as part of the Comprehensive Career Education Model. It includes such areas as module refine-

ment and development, staff development, evaluation procedures, utilization of support systems, delivery system development, and administrative strategies. These and others are the focus of Parts II and III of this publication.

EMPLOYER-BASED MODEL

In a thrust parallel to the development of the school-based model, the USOE funded the alternative employer-based models in June, 1971. Since initial support, four regional laboratories have been charged with the major responsibility of developing an employer-based career education model (EBCE). These include the Appalachian Educational Laboratory, the Far West Laboratory for Educational Research and Development, the Northwest Regional Educational Laboratory, and Research for Better Schools, Inc. Working with a consortia of public and private employers, these laboratories encourage the assistance and active support of diverse community groups as unions, schools, PTAs, Chambers of Commerce, and businesses. The goal is to make the community the classroom by providing educational experiences in a variety of settings, such as laboratories, production lines, parks, museums, hospitals, and construction sites. The models under development by the Far West Laboratory for Educational Research and Development and Research for Better Schools, Inc. are used in this part as illustrative examples of employer-based models. Each has a research base with specific input studies, curriculum approaches, and pilot testing procedures integrated into the research and development framework.

Overview of the Model

In general, the goals of the employer-based models are to 1) provide an alternative educational program for students in an employer-based setting, 2) unify the positive elements of academic, general, and vocational curricula

into a comprehensive career education program, 3) increase the relevance of education to the world of work, and 4) broaden the base of community participation, particularly by involving public and private employers more directly in the educational process.

Research for Better Schools Model

The RBS employer-based model is composed of a management structure, an instructional program, guidance and counseling activities, and an evaluation plan. Since the central element of the model is the instructional program, the nature of the instructional activities strongly influence the governance and management of the model, the nature of student personnel services, and the shape of the evaluation.

The various instructional activities included in the model are based on three major educational themes--general education, explorative education, and specialized education (see Figure 6). The general education component includes basic studies, extended studies, and supplementary studies. The basic studies provide the cognitive, affective and psychomotor skills which all students need in the instructional program and to function effectively in later life. Minimum performance standards have been defined for many of these skills and every student is measured against criterion-referenced standards. The cognitive area includes skills in communication arts, mathematics, listening and thinking; the affective area involves basic skills in intra- and interpersonal behavior; and the psychomotor area addresses perceptual, motor and physical skills. Students who need to develop their cognitive or affective skills are provided a highly individualized learning program in a learning center located at a central facility. A physical fitness program is prepared for each student depending on his needs and interests. It may be conducted at a variety of locations throughout the city using facilities available at YMCAs,

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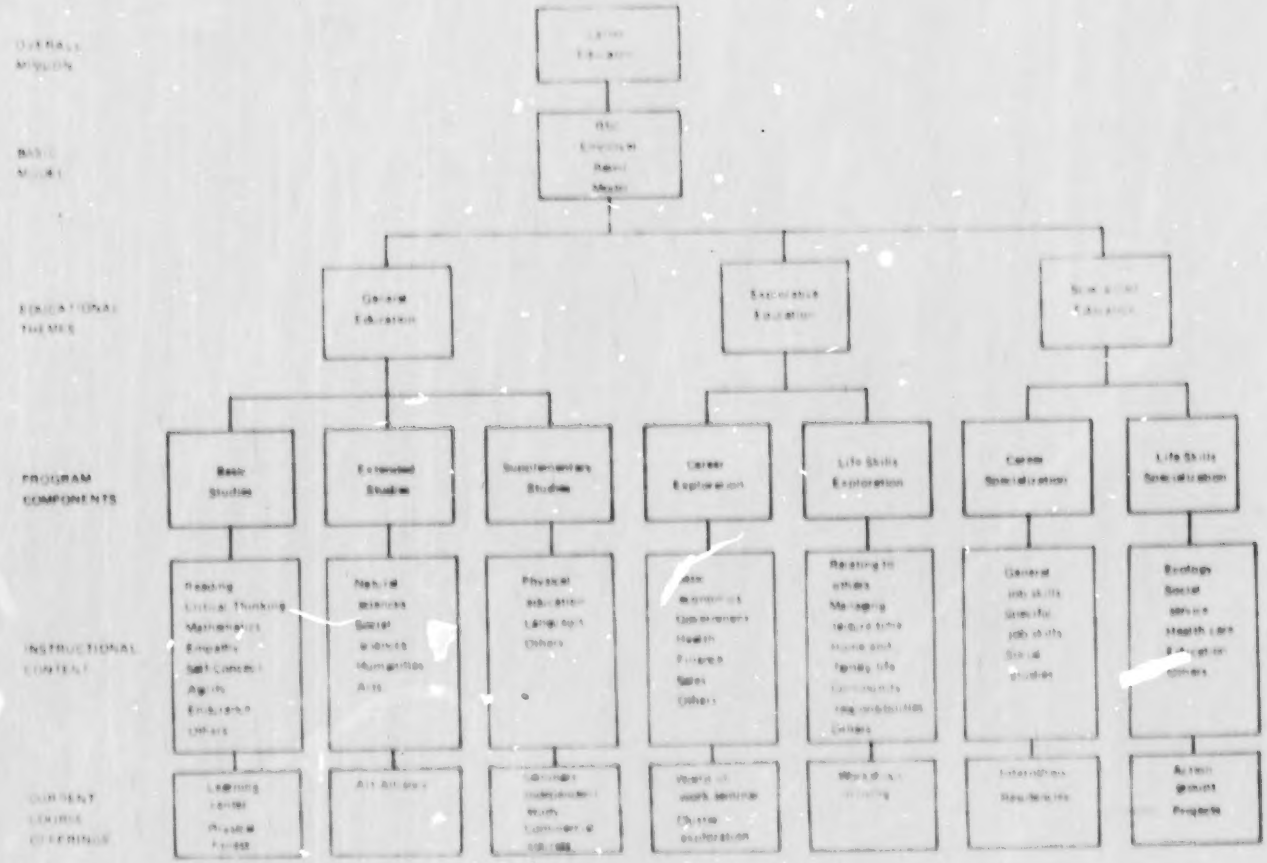
FIGURE F

EMPLOYER-BASED MODEL[1]

(RESEARCH FOR BETTER SCHOOLS, INC.)



[1] Louis M. Maguire and Joan A. Connolly, "Employer-Based Career Education: The RBS Model," A Paper Presented at the Sixth Annual National Vocational and Technical Teacher Education Seminar, Columbus, Ohio, October 23 - 26, 1972, p. 5.

universities, and neighborhood recreational centers. Extended studies involve the "core" curriculum content in the natural sciences, the social sciences, the humanities, and the arts. The instructional program in the Arts, for example, is carried out in cooperation with the Art Alliance, a professional association of artists in the city. It provides a series of lectures and demonstrations in the major fields of art (music, sculpture, drawing) for all students. This required [illegible] is followed by individual and small group work with professional artists in the area of student choice. Additional programs in science, [illegible] cultural studies are under development in conjunction with professional organizations and individual employers. The supplementary studies program includes an extensive variety of optional courses which are tailored to individual needs and interests. Different approaches were used to provide a full range of optional courses for student choice. Through the cooperation of the participating employers, qualified staff members for teaching small group seminars were identified for the formalized instructional aspects. Additional courses are also available through a comprehensive independent study program which includes various self-instructional packages such as the United States Air Force Institute [illegible] materials, computerized courses developed by the School District of Philadelphia, and other published materials.

The purpose of the explorative education component is to provide a broad view of the world of work in the context of a series of life situations. Two different types of explorative experiences are provided in the model. First, career exploration provides students with a broad perspective of the vocational system and career opportunities through a structured survey and examination of employer clusters. A student explores a different cluster each term. A cluster is formed by three related employers; for example, the finance cluster includes a bank, an insurance company, and a brokerage house. Other

sophisticated work skills. A work/study plan for each internship or residency is developed in negotiations between the students, the employer and the counseling staff. Secondly, life skills specialization involves students in activities termed action groups and projects. The action groups are designed to help the student develop and apply the skills learned in life skill exploration. It focuses on an examination of selected issues in contemporary life with a special emphasis on planning and implementation of group action in response to identified problems. Students might be involved in areas such as care for the elderly, voter registration drives, tutoring programs, or tutoring children with learning disabilities. The emphasis is on student regular participation in the ongoing work of [illegible] social action projects such as drug addiction rehabilitation centers, community groups, clinics, etc. Action groups and projects are usually conducted under the auspices of public service agencies.

An important issue in developing a career education program is the extent to which the educational activities are structured. How many instructional hours should be required? Should the program be organized to meet prescribed instructional objectives or be designed to allow maximum flexibility for the student through what curriculum materials, if any, should be structured and sequenced? In contrast to these employer-based models, RBS elected to start with a relatively tightly structured program and to introduce more flexibility over time. Thus, the present model imposes less structure than a traditional high school program but more structure than many alternative school programs.

Far West Laboratory Model

The employer-based model developed by the Far West Laboratory can be defined by seven major features derived from USOE documents, analytic and conceptual studies,

and discussions held with members of the Office of Education Task Force on Career Education.

1) The employer-based model is a comprehensive educational program, combining academic, vocational, social and personal preparation of the student. It is intended as an additional option for the high-school student, rather than as a supplement to the public school or other programs.

2) The program is designed to attract and serve a cross-section of youth, ages 13 to 18. It is not a specialized program for a particular subset of students, such as drop-out, college-bound, or economically disadvantaged, but is intended to accommodate all of these sub-groups.

3) The educational program is not based in the existing public schools. It is controlled at both the policy level and the operational-management level by an organization outside the public school system. Initially, this control is provided by the Far West Laboratory. As soon as practicable, control will be transferred to a consortium of public and private employers--those who supply the real-life settings and resources used in the learning process.

4) Each learner in the program is exposed to a variety of careers in order to provide reasonable diversity and substantial experience on which to base the selection of a career path.

5) The learning process is tailored to the individual student's interests, abilities, pace, and style. Students participate, in a real sense, in the planning of the learning program and assume increasing responsibility for their own education.

6) Learning objectives for each student are in terms of required or desired competencies with the educational progress being based on the basis of ability to demonstrate these competencies. The emphasis is on acquired skills and knowledge rather than on the process by which they were acquired.

7) A major design criterion is to achieve favorable cost-benefit relationships so that the resultant system is comparable in cost with the public schools and is economically feasible.

The purpose of the Far West Laboratory employer-based model is to prepare each student for the diverse roles of a competent adult. Students are exposed to real-life experiences during their "school years" to acquire the understandings, attitudes, habits, and skills needed to survive and prosper in a complex, rapidly changing technological society. In terms of the preparation for choosing and

attaining career goals, the model focusses on self-awareness, self-sufficiency, decision-making skills, social skills, basic cognitive skills, career skills, and skills of employability.

Essential Components in the Model

Each of the employer-based models is based on a series of concepts or propositions that give further meaning to the model. A summary of these for each of the two illustrative examples is provided below.

Research for Better Schools Model

In developing the model, a variety of problems were encountered. Within the context of career education and based upon research and problem solving techniques, the following six propositions were developed. First, career education is a complete educational program designed for students with a wide range of characteristics and interests. It is not designed for any one element within society, but instead provides a highly individualized form of education which accommodates the needs of all students and attempts to relate their education to their future life and career. Second, career education even when conducted by employers, is not a radical departure from existing forms of education. Much of the content and procedures parallel the existing structure, but different strategies, environments, and techniques are used to focus the entire educational system on a career orientation. Third, the ultimate success of the employer-based model depends on changing educational folklore, custom and law as related to such issues as taking courses only from certified teachers, the school as the locus of all meaningful learning, and the supervision of academic credit by the educational bureaucracy. Fourth, the educational experiences available to students outside the formal school setting has never been fully exploited or systematically explored. Communication, legal, and administrative barriers need to be set aside

to determine the extent to which employers can contribute to education. Fifth, the employer-based model provides an opportunity for progress toward curriculum fusion and program integration. Sixth, the employer-based model provides an alternative to students and the public school system. Potential is provided to reduce over-crowding, refit cooperative education arrangements to serve as an integral aspect of urban development, enhance the quality and breadth of instructional materials, and create "open learning" systems based on the real world.

Since the EBC model is a demonstration model, its primary goal is to establish and maintain an operational program consistant with the propositions above. The heavy commitment to this aspect places long-range curriculum development efforts in a secondary role.

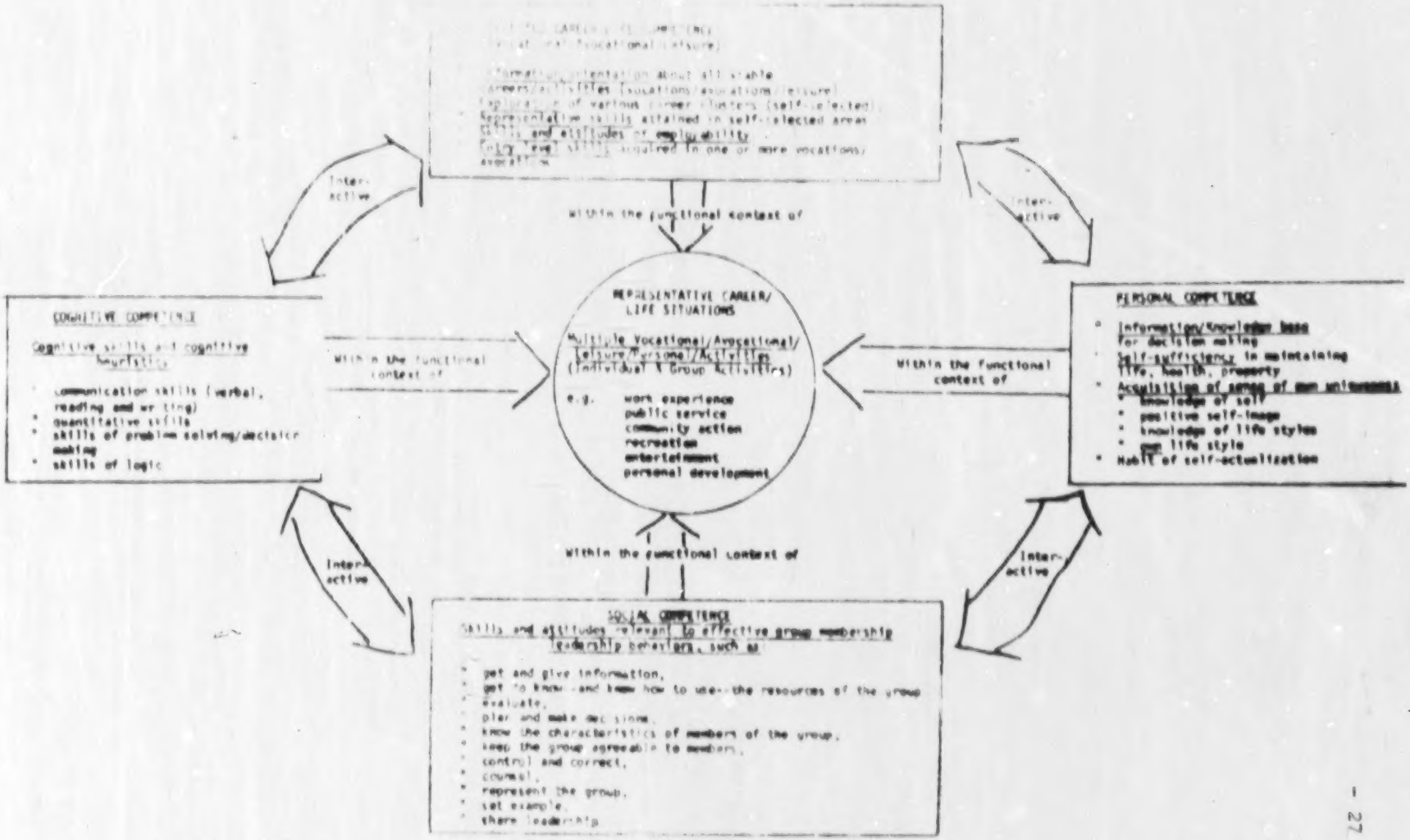
Far West Laboratory Model

While similar in many regards, the Far West Laboratory employer-based model places far greater emphasis on curriculum development and instructional and learner systems. The employer-based curriculum is based on a set of six characteristics that define this alternative model. First, the curriculum integrates vocational, avocational and leisure pursuits with other intellectual, social, and personal development areas (see Figure 7). Second, the model is designed around the individual learner rather than being built around individual classes of students. Not only are individual learning rates and styles observed, but the content and context of the experiences are tailored to fit the individual. Third, the curriculum is based within the functional context of real life situations. Experiences are based on "here and now" factors in an attempt to better prepare for the future. Fourth, the educational experiences in the model are performance based. Fifth, the curriculum experiences are planned, programmed, and monitored on a partnership basis involving

FIGURE 7

CAREER EDUCATION: A CURRICULUM MODEL[10]

(FAR WEST LABORATORY)



[10] Bela H. Banathy and Robert N. Peterson, "Employer - Based Career Education (EBCE)," Prepared for a Symposium on Career Education at the Annual Meeting of the America Educational Research Association, Chicago, Illinois, April 3-7, 1972, p.8.

the learner, staff and other resource personnel. Sixth, responsive learning environments are created that extend throughout and beyond the immediate community.

The curriculum characterized above is operationalized through the activation and interaction of the instructional and learner's system. The end result of the instructional system is the availability of a wide variety of learning opportunities. Through a process specification, the content is defined at the detailed module level by performance or experiential objectives, objective related measures, and prerequisites. Alternative activities are provided as means of attaining the objectives. An information system is used to provide information concerning people, materials, procedures and areas available. Using the model to organize the resources, environment, and procedures for potential learning activities. The learner's system is used to introduce the strategy, operational arrangements, and resources by which the learner's objectives can be planned, programmed, implemented, and monitored. These activities are built on the informational system and organized into a situational sequence to form a "student experience trail."

HOME/COMMUNITY-BASED MODEL

In July, 1971, the Educational Development Center in Newton, Massachusetts, was awarded a contract from the U.S. Office of Education to carry out a program of research and technical support relating to a home/community-based model for career education. The initial effort was concerned with the identification of potential target populations, forms the model take for these populations, and an analysis of similar programs. Based on this preliminary research, it was decided not to proceed with a national television

version, but instead to undertake a pilot in one or more cities to test the feasibility of the home/community-based model that had been developed.

Overview of the Model

The home/community-based model consists of a comprehensive career-oriented program centered on individualized learning programs. It relies strongly on support by career development centers located in the community which provide [illegible], testing, and referral services aimed at identifying and assessing career interests. Although the character of the model is flexible, [illegible] to the extent that it can be shaped by the interests of the community, the essential components retain the same comprehensive career education base, scheduling and tutorial services, and a multi-[illegible] system. There are four underlying assumptions of the home/community-based model.

1) There are substantial home/community-based [illegible] in the [illegible] area, women, young people in transition [illegible] who [illegible] existing resources for career education.

2) These populations may be reached through the mass media in particular, through the use of television, radio and the press.

3) There is a limited but expandable capacity on the part of the existing service network (community colleges, continuing education programs, volunteer organizations, and the like) to respond to these people around career education issues.

4) There is a need for a central switching process to support existing career education service agencies to one another and to the career education interests of home/community-based populations.[10]

The specific goals of the home/community-based model are to:

1) Reach home-community-based populations presently not using career education resources.

2) Involve substantial numbers of them in career education and, by doing so, to expand their options for entering into the life of the community - through occupations, professional employment or through sustained volunteer activity.

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[10] [illegible], The Home/Community-Based Model. "A Paper Prepared for a Symposium on Career Education at the Annual Meeting of the American Educational Research Association, Chicago, Illinois, April 3-7, 1972, p. 2.

3) Help agencies and individuals in the community, who could provide career education, to gain access to these populations; to integrate their efforts as they do so, and to become increasingly responsive to the emerging career education needs of these populations.

4) Identify those needed resources that do not exist in the community, and to recommend to the appropriate agencies, the development or provision of these services.[11]

Essential Components of the Model

The model is based on the premise that existing agencies are not responding to the career and educational needs of the home/community-based population. The feasibility testing of the model is accountable for the development of [illegible] activity styles that facilitate the reduction of problems and difficulties associated with the coordination of existing agencies and provide the base for the establishment of new mechanics.

The central theme of the model is to orchestrate the various resources in an attempt to reach and respond to the career education needs of the home/community population. The essential components in this respect are based on the use of the media, the bringing together of existing career education agencies, and the establishment of a central vehicle to carry out network functions.

1) The mass media serves to attract the attention of home/community-based populations, probe the career education interests of these populations, and generate feedback about their needs, provide information about existing career education resources, and inculcate certain skills related to engaging in career education.

2) The coordination of career education agencies brings them together to coordinate their efforts to reach home/community-based populations, tackle problems of accessing the target population, identify and attempt to fill gaps in service, and respond effectively to the emerging career education interests.

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[11] Ibid., p. 2-3.

3) The establishment of a central vehicle (the Career Education Extension Service) carries out the network functions to receive and interpret feedback from home community-based populations, refer individuals to existing agencies, identify problems of access and aid in their solution, identify services gaps and assist in meeting them, gather and disseminate information about promising approaches to career education and the effectiveness of existing approaches, and systematically integrate all of the above.

RESIDENTIAL-BASED MODEL

The residential-based model utilizes many of the components prevelant in the other models while developing around a total involvement, self-contained educational community. Funded through the Mountain-Plains Education and Economic Development Program, Inc., the career education program is designed for rural families in Idaho, Montana, Nebraska, North Dakota, South Dakota, and Wyoming. Its purpose is to provide individuals and entire families an opportunity to improve their economic, social, and personal status through a personal effectiveness and home life skills approach. This research and development program is located along with other federally funded projects at Glasgow Air Force Base near Glasgow, Montana. Complete recreational, educational, and other required facilities and services are available on the Base to participants in the program.

Overview of the Model

The Mountain-Plains residential-based model is aimed at providing both career and educational services. Participants in the program come from residents in the six involved states. Moving expenses to Glasgow for the family are paid for by the program with the participants maintaining complete responsibility for expenses incurred while in the program. These are minimal as the forty dollars per month for rent, including utilities, indicates. Stringent require-

ments are maintained to insure that each head of the household participates a minimum of forty hours per week and that the spouse is involved a minimum of twenty hours per week. These schedules are prepared cooperatively with the staff and the participants.

Successful completion of the program is based on the completion of all instructional areas that are part of each area of study. There are no two programs exactly alike with each varying according to the goals, interests, and needs of the student. A period of nine to twelve months is expected to complete a typical program that might include health, consumer buying, budgeting, leisure skills, counseling, career guidance, problem solving, math and communication skills, and occupational preparation in the selected area. Those such experiences in the program attempt to provide motivation to continue education; guidance for future education and employment; personal, marital, occupational, and child counseling; basic and foundation courses for further career preparation and skill development; and a work/education partnership.

Essential Components of the Model

The residential-based model is based on two major components that unite the family and educational environments. While described separately under Family Services and Educational Services together they form a totally self-contained educational community.

Family Services

Upon acceptance into the program, the two-pronged approach begins in the residential-based model with planning and consultation with staff members in the Family Services Division. Based on an identification of needs and skills and knowledge required to meet these needs, programs including counseling, home management, health education, recreation, and early childhood education are

developed. These programs assist family members to improve their personal skills and increase their ability to benefit from opportunities available in their home communities and to improve their life styles.

The amount of emphasis placed on each of these areas varies with the needs of the family. Some aspects of each area receive equal attention throughout the duration of the program while others are provided in concentrated blocks. For example, counseling services and home management emphasis permeate the participants experiences by providing assistance in personal decision making, preparation for employment, self-understanding, and activities, such areas as in money management, meal planning, home care, and home planning to meet personal and family needs. While health education follows the same basic pattern, major emphasis is placed on such areas as health awareness, first aid, dental hygiene, accident prevention, and home care of the ill during the first two months. In a similar manner, recreation and early childhood education are integrated into the entire program. The early childhood program is mandatory for all pre-school children and all mothers that are not heads of a household. This cooperative approach provides educational and nutritional programs for the children and educational experiences for the parents.

Educational Services

The educational services component of the program is designed around three integral components. While described singularly, each is used to reinforce and support the other.

Career Guidance. This aspect of the model is designed to assist the student develop a completely planned and individualized educational program. The focus of career guidance is to assist the participants to learn more about the world of work so they can determine and select potential careers, develop

appropriate work attitudes, and gain first-hand experience in work situations. This process combines occupational guidance (aptitude tests, interest inventories, and occupational exploration), work experience, and career development that utilize staff and community resources.

Foundation Education. The basic courses and experiences provided in the foundation courses are designed to fulfill skill objectives in mathematics and communication that are inherent in successful completion of the selected career field. Use is made of nationally standardized tests for placement purposes and to insure proper emphasis on the development of the required competencies. The program also utilizes GED and CLEP examinations in this process. A third instructional element in this area is problem solving, which is aimed at creating a learning environment where adults deal realistically with individual problems. It incorporates both individual and group-centered activities that make use of tapes, records, video tapes, and other multi-media.

Career Preparation. Five broad instructional areas have been developed to prepare the participants for a career in one of the fields related building trades and services, educational mobility and transportation, and office education. The courses used in designing a program for an individual vary considerably and frequently cross all five instructional areas. For example, an individual in building maintenance takes courses in carpentry, electricity and plumbing while at the same time elects to take welding and small engine mechanics so employment is possible in a resort area. Courses in medicine, office education, and social services may also be selected.

CONCEPTS AND PRECEPTS IN CAREER EDUCATION

The major career education models have far greater conceptual complexity with more inputs than found in the vast majority of programs currently

in existence in the public school systems. The models are based on the identification and analysis of major components required to adapt the present curriculum patterns into a common theme that is consonant with the goals of career education. Career education demands a reassessment of the total educational system in terms of new goals that premeate all educational programs.

An analysis of the four models reveals several concepts and numerous guiding precepts that are inherent in the career education thrust. In summary, some of the major concepts within the context of career education are to:

1) Redirect the goals of the total educational system around a career orientation with real-life experiences.

2) Fuse the entire educational system into a unified, comprehensive approach to provide an educational continuum for all youth.

3) Provide equal and continous educational opportunity to all individuals in society.

4) Involve all segments in the community in a total educational effort and partnership.

5) Enhance knowledge of self, facilitate self-actualization, and optimize career development for each individual.

6) Utilize evaluation, experimentation, demonstration, and curriculum development research models to refine the system.

7) Develop alternative instructional systems, learning systems, instructional modules, and approaches to individualize the learning process.

8) Integrate career guidance with the total educational environment so all educational personnel share in its responsibility.

In support of the concepts the following precepts are provided as illustrative guides that expand and give further direction to career education by providing:

1) Approaches that unite students, parents, educational personnel and individuals in the community.

2) Information and experiences that represent and simulate the world of work.

3) Experiences that guide the student through a developmental process of career awareness, orientation, exploration, and preparation.

4) Performance-based programs that deal with the affective, cognitive, and psychomotor domains.

5) Research-based elements, instructional materials, and curriculum patterns.

6) Career interest, development, and preparation activities as a major motivating force.

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